

# Fecal microbiota transplant effective for immune-mediated colitis, finds study

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For patients with refractory immune checkpoint inhibitor (ICI)-induced

colitis, fecal microbiota transplantation (FMT) is an effective treatment, according to a study published in the June 14 issue of *Science Translational Medicine*.

Taylor M. Halsey, from the University of Texas MD Anderson Cancer Center UTHealth in Houston, and colleagues, reported a case series of 12 patients with refractory immune-mediated [colitis](#) (IMC) who underwent FMT from healthy donors as salvage therapy. All patients had grade 3 or 4 ICI-related diarrhea or colitis that did not respond to standard first- and second-line immunosuppression (corticosteroids and infliximab or vedolizumab).

The researchers found that 10 of the 12 patients achieved symptom improvement and three patients required repeat FMT; two of these had no subsequent response. Ninety-two percent achieved IMC clinical remission at the end of the study. Based on 16S rRNA sequencing of patient stool samples, compositional differences between FMT donors and patients with IMC before FMT were associated with a complete response after FMT.

In patients with complete responses, comparison of pre- and post-FMT stool samples showed significant increases in alpha diversity and increases in abundance of *Collinsella* and *Bifidobacterium*, which were depleted in responders before FMT. Compared with non-complete response patients, histologically evaluable complete responders had decreases in select immune cells including CD8<sup>+</sup> T cells in the colon after FMT.

"We expect that FMT will become a useful approach to treat [patients](#) with IMC at earlier stages of presentation, as an addition or alternative to standard treatments, which could, in turn, be guided by insights from this study into unique microbial signatures that may play a role in the therapeutic IMC response to FMT," the authors write.

**More information:** Taylor M. Halsey et al, Microbiome alteration via fecal microbiota transplantation is effective for refractory immune checkpoint inhibitor–induced colitis, *Science Translational Medicine* (2023). [DOI: 10.1126/scitranslmed.abq4006](https://doi.org/10.1126/scitranslmed.abq4006)

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